



**JUNE 1954**

# **SOIL CONSERVATION**

OFFICIAL ORGAN OF THE SOIL CONSERVATION SERVICE

# SOIL CONSERVATION •

JUNE 1954

VOL. XIX—NO. 11

**EZRA TAFT BENSON**  
SECRETARY OF AGRICULTURE

**ROBERT M. SALTER**  
CHIEF, SOIL CONSERVATION SERVICE

ISSUED BY SOIL CONSERVATION SERVICE, U. S. DEPARTMENT OF AGRICULTURE  
WASHINGTON, D. C.

## ★ THIS MONTH ★

	PAGE
<b>DROUGHT DAMAGE ON SOUTHWESTERN RANGES</b> By B. W. Allred	243
<b>TELLING THE STORY</b> By Roy E. Ballard	248
<b>MANAGED WATER BRINGS GOOD TIMES</b> By Herbert F. Gaines	250
<b>66 SQUARE MILES OF PASTURE</b> By Lester Fox	252
<b>RAISE YOUR OWN GOPHER TRAPS</b> By J. W. Garlinghous	255
<b>WINS TOP PRIZE</b> By Edgar F. Baumann	257
<b>ONE NEEDED PRACTICE LED THE WAY</b> By Hugh F. Eames	258
<b>TEAMWORK IN CONSERVATION</b> By A. M. Hedge	263

**WELLINGTON BRINK**  
Editor

SOIL CONSERVATION is published by direction of the Secretary of Agriculture as administrative information required for proper transaction of the public business, under approval (August 6, 1951) of the Director of the Budget. SOIL CONSERVATION supplies information for workers of the Department of Agriculture and others engaged in soil conservation.

15 CENTS PER COPY

\$1.25 PER YEAR

FOREIGN—\$1.75 PER YEAR

25 percent discount on orders of 100 or more subscriptions  
mailed to a single address

**GRAZING LANDS, ALSO.**—Recently enacted legislation amends the State law to provide for the inclusion of rangelands in soil conservation districts in the State of Arizona. In the original law, enacted in 1941, activity of districts was limited, essentially to farmlands. Surveys and investigations can now be made by appropriate agencies, which will provide a physical inventory and other information needed as prerequisites to farm planning and the application of various practices. Districts are now able to carry on demonstrations and develop a range program of reseeding and eradication of noxious growths. This will also make it possible for SCS technicians and ranchers to work together in considering range conditions, forage utilization and other factors affecting soil and water conservation on rangelands.

**AWARD WINNER STEPS UP.**—The conservation award winner for Middlesex County, L. Roy Hawes of Sudbury, has been appointed Commissioner of Agriculture in Massachusetts by Governor Herter.



**FRONT COVER.**—“Far from the madding crowd’s ignoble strife” on the Frank Kimball farm, in Merrimack County, N. H. This gentle scene is authentic and unretouched, from the camera of Gordon S. Smith. It sets a proper theme for a magazine devoted to the good stewardship of soil and water.

All orders go to the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

S  
d  
since  
TH  
west  
west  
south  
brow  
TH  
tory.  
both  
areas  
or sh  
Many  
2 ye  
of th  
hay a  
Dr  
hit a  
3 add  
Del F  
years  
in du  
Josep  
Th  
that  
lack  
Drou  
oak i  
shinn  
Plate  
suffer  
Tarbu  
Trans  
Note.—  
plannin  
D. C.

# Drought Damage On Southwestern Ranges

*Here is the hard truth about range conditions: an important article by one of our most widely respected authorities. Once again, sound conservation proves its worth.*

By B. W. ALLRED

**S**OIL in the Southwest has dried out deeper during this drought than at any other time since the white man has lived there.

The hot sun has blistered the whole Southwest but the country in the Rio Grande Plains, western Edwards Plateau, Trans-Pecos and southern High Plains was cooked to a deep brown.

This drought is the longest in recorded history. It has been the most damaging of all to both livestock and grass. In the hardest hit areas up to 90 percent of the livestock were sold or shipped to grass several hundred miles away. Many ranches have been without livestock for 2 years. Some operators have retained part of their choice breeding stock and shipped in hay and concentrates to keep them alive.

Drought has lasted 3 to 4 years in the hardest hit areas. Rainfall has been below normal for 3 additional years around Dryden, Sheffield and Del Rio, Tex. This makes a total of 7 droughty years for these localities. This period equals in duration the 7-year drought in the days of Joseph of Egypt, the longest of Biblical record.

The weather was so dry at Uvalde, Tex., that liveoak trees over 300 years old died for lack of water. Many young trees died too. Drought killed post oak, blackjack and Spanish oak in the Texas hill country. A lot of cedar, shinnery oak and mesquite died in the Edwards Plateau. Guajillo, mesquite and black brush suffered considerably in the Rio Grande Plains. Tarbush and mesquite took a licking in the Trans-Pecos.



Too many cows and too little grass result in loss of many animals. Here is a cow starving on an overgrazed range in Starr County, Tex.

Brush and tree survival will be higher than expected, however, and much that apparently is dead will root-sprout as soon as rains replenish soil moisture. A lot of grass died too but, fortunately, enough good grass was left to restore the range provided safe grazing is practiced.

Anything that damages the Southwest's grazing resources hurts business because such a large part of the country is suited only to grazing.

In Texas alone there are over 102 million acres of native grassland plus 4 million acres of tame pasture, over 7 million acres of piney woods and nearly 7 million acres in the East Texas post oak belt which are grazed. In Oklahoma nearly 20 million acres are grazed. Over 75 percent of this acreage is not suitable for

Note.—The author is soil conservationist, farm and ranch planning branch, Soil Conservation Service, Washington, D. C.

farming; hence, grazing will probably always be its highest use. If it weren't for livestock grazing in this vast area, very little wealth would be produced from it.

Rangemen in the Soil Conservation Service have made surveys of drought damage to range plants in Oklahoma and Texas. Checks were made only where late summer or early fall rains in 1953 provided sufficient moisture to revive the remaining live plants. The following summary gives a general review of the findings:

1. All grazing land, whether grazed or not, had some plants killed. It requires about 400 or 500 pounds of water to produce 1 pound of dry grass. Droughty ranges provided too little moisture to let all the plants live and reproduce.

2. Ranges that had a lot of the better grasses on them before the drought are coming out of it with enough live grass to restock the ranges with good kinds of grass.

3. Considerable grass and better forbs or non-grassy herbs survived in brush where animals have been unable to graze.

4. Area without brush lost proportionately more grass than brushy ranges except where light grazing was practiced. One exception is on sandy shinnery oak ranges at Cheyenne, Okla.

5. Ranges that have had moderate grazing are resurrecting faster than those on which heavy grazing had been practiced.

6. Moderately grazed ranges are getting well about as fast as those in comparable condition but which had not been grazed for several years.

7. Vegetation on rocky ranges survived better than on hard land. This is due to two main reasons. The better and deeper rooted grasses lasted longer on rocky ranges because moisture conditions are better there than on hard land. Grazing usually is heavier on hard lands because they are smoother and more easily reached by the livestock. The taller grasses are grazed out first and are replaced by buffalograss and curly mesquite, which are killed easily by drought. Runoff from rain is greatest from poorly covered hard lands. Also moisture from rain does not penetrate very deep into hard land soils, hence evaporation is

high. Little water is available for plant growth under such conditions.

8. All plants survived best on the better managed ranges.

Generally the taller and more deeply rooted grasses survived the best. These plants are called *decreasers*. They are the first to go out under heavy use. However, they survive and produce normally under correct grazing use. Death losses on this group of grasses ran 5 to 30 percent. Some of these are side-oats grama, bluestems of all kinds, green sprangletop and vine mesquite.

We have another group of grasses, called *increasers*, which suffered more from drought than the *decreasers*. They are called *increasers* because under heavy grazing in normal times they replace *decreasers* until grazing becomes abnormally heavy, then they too are thinned out or become replaced by inferior plants. Drought losses on this group ran from 25 to 90 percent. Some of these grasses are tobosa, buffalograss, curly mesquite, three-awn or needlegrass and hairy grama.

When the grazing becomes heavy enough to thin out this group of grasses they are replaced by lower-order grasses called *invaders*. These are short rooted and death losses during the drought ran from 35 to 95 percent. Some of these *invaders* are red grama, red lovegrass, hairy triodia, Wright's three-awn, burrograss and the annual weeds.

A check on grass seedlings indicates the following to date:

1. Seedlings from the taller grasses are still scarce. Generally there are fewer of the taller grasses left to produce seed. The exceptions to this are cane and silver bluestem, both of

### Pictures Opposite

Top: Thrifty stand of buffelgrass on W. B. Osborn ranch north of Rio Grande City, Tex. Planted in fall of 1951, growth of grass was slow in 1952 and early 1953 because of drought. This picture was made in November last year, and grass shown was produced on rain that fell in July.

Center: Grasses made seed on short rainfall in 1953 on East ranch, Monte Mucho Soil Conservation District. Ranges is in fair condition and improving. Better grasses that made seed are tanglehead, plains bristlegrass, cottontop, and cane bluestem.

Bottom: Tall bristlegrass and fourflower trichloris on moderately stocked and brush-cleared range, Osborn ranch, November 1953.







Killam ranch range cleared of brush and covered with trichloris, plains bristlegrass and other good grasses. Once the brush is removed and the range rested, native grasses reseed voluntarily and restock with good grazing plants.

which produce a great many feathery seeds which are blown considerable distances from mother plants. The seeds germinate readily and seedlings are hardy.

2. Buffalograss and curly mesquite are making a quick come-back from stolons, the vine-like stems that aid their spread. Some seed of these two grasses also have sprouted new plants. Three-awn is making a rapid comeback from seed. As many as 5 to 50 seedling per square foot were counted on some rocky sites. Tobosa is thickening up fast from short root-stocks.

Where good rains have fallen repeatedly, there is a rash of grass and weed invaders showing up. Among these are red grama, burro-grass, red lovegrass, hairy triodia, Wright's three-awn and annual weeds, including poisonous bitterweed.

The foregoing gives a preliminary indication of how well range plants have withstood the drought. It will be 2 or 3 years before an accurate appraisal can be made. For one thing, a lot of country has had too little rain to give plants an opportunity to revive. Also, there are many sickly buds that may not revive before 1 to 3 years have passed.

Before the drought it was estimated that 10 to 12 million acres of rangeland needed to have seed planted on them in order to restore their productivity. We are afraid that the present drought has added another 3 or 4 million acres to that unfortunate condition. The rate of grass loss during this drought has been the heaviest in man's history.

Drought experiences of southwest ranchers show that *ranches on which sound conservation has been practiced have suffered less hardship than those without conservation.* Ranches where conservation has been practiced lost comparatively less grass, livestock lived better, and the income was considerably greater. For example, the income benefits in favor of conservation ranching is borne out in a study comparing cattle production on 9 ranches in the Starr County (Tex.) Soil Conservation District at the beginning of the drought. Four of the ranches practiced conservation and five did not. These figures were for 1947-1950.

Item	Without Conser- vation Five Ranches	With Conser- vation Four Ranches
Acres per cow	17	44
Land investment per cow	\$340	\$880
Cattle investment per cow	\$170	\$175
Total investment per cow	\$510	\$1,055
Average weight, per calf, pounds	350	410
Beef produced per acre, pounds	6.4	6.2
Beef produced per cow, pounds	110	273
Value of beef produced per cow	\$27.50	\$68.25
Gross returns per \$100 invested in land and cattle	\$ 5.37	\$ 6.45
Gross value of beef produced	\$15,837	\$50,020
Labor and management earnings, per ranch	— \$ 1,409	\$11,225
Amount earned per hour	— \$ 0.21	\$ 1.28

Note:— The following evaluations were placed on the items under consideration: land, \$20 per acre; cows, \$150 per head; bulls, \$250 per head; calves, 25 cents per pound.

(Continued on page 248)



Grass planting trial on baked hard-pan range, Tornillo Flat in the Big Bend National Park. This is within the Big Bend Soil Conservation District. The crusted soil was broken with a range-pitting machine on part of the land. Pitted areas caught and held rainfall that germinated seed of annual and perennial grasses. Revegetation program failed on bare areas which held no water for grasses to drink.



Excellent growth of plains bristleglass, trichloris and Arizona cottontop on mesquite-cleared range on Killam ranch near Laredo, Tex. Brush was chopped in September 1953 and range has been rested in summer and grazed during the winter since then.

Several significant facts are apparent:

1. On the ranches that practiced conservation, the amount of money invested in land was over  $2\frac{1}{2}$  times the other. However, the labor and management earnings averaged \$11,225 for the conservation ranches, but there was a minus \$1,409 per ranch on the ones without conservation.

Elias Guerrero, work unit conservationist in the district, says the reason the ranches with conservation made the most money was due to the following:

1. Cattle had plenty of cheap grass to eat; they stayed in good condition and produced much better calf crops than the others.

2. Cost of supplemental feed was several times less.

3. Plant cover was better, less water ran off or evaporated and more moisture remained in the ground to grow grass.

Guerrero reports that the same ratio of benefit resulting from conservation ranching versus ranching without conservation has carried right on through the drought to the present.

## Telling The Story

By ROY E. BALLARD

**T**HE Board of Directors of the Tehachapi (Calif.) Soil Conservation District are telling the story of soil and water conservation.

For one thing, it made sure that people saw the conservation measures established in the district. It arranged a tour for the businessmen of Tehachapi. Some of the group stopped in a field of Akaroa orchardgrass planted and irrigated in contour grade rows on the Jacobsen Brothers ranch just south of town. Others paused at the edge of a field of Narragansett alfalfa planted and irrigated on contour grades.

Note.—The author is work unit conservationist, Soil Conservation Service, Tehachapi, Calif.

Another device was to use signs calling attention to the district and its work. They are of two types: (1) district and (2) individual ranch. Some of them were placed where the east and west boundaries, respectively, crossed U. S. Highway 466.

Many individual ranchers were encouraged to erect signs on their property. For example, Don I. Carroll, owner of the Grand Oaks Ranch, put a marker where one boundary of a field of Atlantic alfalfa was continuous with a road boundary. The seed alfalfa had been planted on ground previously dressed with a land leveler. Another sign was set at the edge of a field of Akaroa orchardgrass which was planted and irrigated in contour grade furrows. This was on the ranch of J. C. Jacobsen, Jr.

Conservation workers from outside the district were guests on a conducted tour to a number of ranches where conservation measures were established. One stop was made at the common boundary of two adjoining fields: In one Narragansett alfalfa was planted, cultivated and irrigated on contour; in the other was Merion bluegrass. All cultural operations were on contour. A halt also was made where a field was being protected from wind and water erosion by a vegetative covering of Goar's tall fescue grown for seed.

The importance of printed material was not overlooked. A 1-year's subscription to SOIL CONSERVATION MAGAZINE, was provided each rancher in the district and to the businessmen in the city of Tehachapi. That move was made to acquaint them with the national scope of conservation work. In addition, a copy of "Down the River," a publication issued by the Soil Conservation Society of America was distributed to schools, ranchers and businessmen. Moreover, a number of key publications of the Soil Conservation Service were put to work. The annual report of the Board of Directors of the Tehachapi district was published and given good distribution. Residents of the district were reminded by use of postals of the time, date and place of the various meetings held by the Board of Directors.

In telling the story, advantage was taken of visual aids such as conservation films and color slides. Believing that children should be schooled on conservation of natural resources,

the  
way  
teach  
inter  
30 c  
Rive  
num  
conso  
avail  
The  
schoo  
conso  
their  
A  
show  
They  
condi  
appli  
schoo  
visua  
Boy S  
The  
News  
usabl  
series  
vidua  
it wa  
veget  
ment,  
and a  
article  
Califo  
servat





Signpost of progress.



Conservation workers, guests on tour, view a planting of Goar's tall fescue.

the Board of Directors cooperated in every way possible to bring about such training. The teaching aids library of the office of the superintendent of Kern County schools contains over 30 conservation motion pictures such as, "The River" and "Stormwaters," together with a number of film strips and slides pertaining to conservation. Two of the films were made available by the Soil Conservation Service. The Board of Directors mailed a card to the schools in the district calling attention to the conservation films and slides, and encouraging their use.

A number of color slides have been made showing conservation work in the district. They tell an impressive story. They covered conditions before conservation measures are applied, their application and the results. The schools were not alone in benefiting from such visual aids. Others who saw the slides were Boy Scouts, Grange, churches, and ranchers.

The *Tehachapi News* and the *Mojave Desert News*, local newspapers, were supplied with usable material each week, each article in the series confining itself to a project on an individual ranch. It showed the problem and how it was solved. They dealt with windbreaks, vegetated waterways, stream-channel improvement, land leveling, contour-grade irrigation, and a number of other practices. Feature articles were published in *SOIL CONSERVATION*, *California Farmer*, *The California Soil Conservationist* and other publications.

The story was also told by displays of 8 x 10 pictures, fully captioned, depicting conservation practices established on the local ranches. The Board of Directors have voted to go farther with this means of telling the story by constructing small bulletin boards on which to make such displays, and by locating them in windows of various business places where they will catch the attention of the public.

By the means explained above and others, the Board of Directors of the Tehachapi Soil Conservation District have accepted the responsibility of telling the story of conservation to the residents of the district.

---

**HOW PRACTICES SPREAD.**—Satisfied customers sometimes slip in as pinch hitters in the promotion of soil and water conservation.

When his farm was planned 2 years ago, J. B. Bernard of Franklin County, Va., didn't care much for striperopping. Bernard recently, however, began to show some interest in strips and Lloyd E. Wray, a conservation aid, suggested that they go to the farm of Walter Woody, another cooperator, and see some strips on the ground.

Woody really did a bang up job in explaining his strips and sodded waterways, with the result that Bernard now plans to establish 100 acres of strips and 8 acres of meadow outlets in one field. The strips are being staked, marked, and set up in a 3 year-rotation. This will be the largest field of striperopping in the county.

---

**DISTRICT STATISTICS.**—There were 2,586 organized districts in the 48 states, Hawaii, Alaska and the Caribbean area, as of January 1, 1954. Twelve states, the Virgin Islands, and Puerto Rico are completely covered by districts; Connecticut being the twelfth state to be completely covered.

# Managed Water

## Brings Good Times

*Sprinkler irrigation and drainage, where needed, lead to quick production increases in Washington's Pend Oreille Soil Conservation District.*

By HERBERT F. GAINES

OF some 900,000 acres in the Pend Oreille County, only 33,000 were under cultivation and 102,000 acres were in pasture.

The cultivated land was shallow, droughty, glacial soil which had been subjected to from 20 to 60 years of grain and hay. Although actual soil erosion was at a minimum, the land was suffering from soil depletion, mineral and chemical starvation, and severe leaching. The 22.59 inches of annual precipitation came mostly as snow during the non-growing season.

This was the situation in 1949, when Alex Weinstein, V. P. Campbell, Harold Richards, Paul Meir and Charles Hoisington held their first meeting as a board of soil conservation district supervisors. Fifty-five percent of the farmers had to supplement their income from the land by work in the mines, the mills, or around town. On forty-one percent of the farms less than 20 acres were in cultivation each year. Two courses were open to them: They could clear more land or they could produce more from the land they had.

The supervisors invoked the help of the Soil Conservation Service.

In the few years since then, more than half of the 500 farmers have signed up with the district for assistance; 5,100 acres have been seeded to new and improved varieties of grasses and legumes; 4 dikes and 5 farm ponds have been constructed; 22½ miles of drainage ditches have been dug, benefiting some 2,870 acres; 46 new sprinkler irrigation systems

have brought new life and productivity to more than 3,500 acres. Besides all this, the district has promoted contour farming, crop rotation, uniform grazing practices, woodland management, fertilizing, seed development and other conservation practices through their cooperation with the SCS, Forest Service, and other State and Federal agencies.

The district maintains a bulldozer, a drill, a packer, a ditcher, a grader and a heavy breaking plow which are available at low rental rates to cooperators. It employs Matt Jermain to operate the "dozer" and manage the equipment. Matt is considered an expert at clearing land, ditching swampy peatlands, and building dams and dikes.

Increased value from sprinkler irrigation systems has been estimated at \$195,000, with a net increased production profit of \$120,000. Increased value of drained lands (at \$25 per acre) is \$70,000, and added production brings another \$42,000 profit. Total increased gain for one year: \$427,000. These figures omit the benefits from all of the other conservation practices, and most important of all, they omit the fact that the soil building efforts of Pend Oreille farmers will assure their sons and grandsons an opportunity for the future.

Although about 4,000 acres of new land has been cleared, most of it has been set aside for pasture. Thus, the same land is being cultivated today as in previous years. A measuring stick for the progress made in soil building might be the figures from a grain-shipping point, showing the number of carloads shipped during various years: 1947-17 carloads; 1952-55 carloads; 1953-75 carloads. This grain came

Note.—The author is work unit conservationist, Soil Conservation Service, Newport, Wash.



Bill Curdy's sprinkler irrigation system is typical of the Pend Oreille country. Without irrigation this droughty Class IV soil would produce only three-fourths ton of hay per acre, and but one cutting with irrigation, the yield runs around 5 tons per acre.

from land that not too far back was producing only 500 pounds of wild hay to the acre, and when in grain only one-fourth ton of oats.

Applying the findings of USDA circular No. 891 to the sawmill-dotted Pend Oreille district, many interesting experiments have been carried out in the use of sawdust on farmland to increase water absorption, aid in mulching, and provide nutrition to the soil. Farmers have found that a great deal of nitrogen fertilizer is required to break down the sawdust, but that the condition of the topsoil is improved in the process. We have an unlimited supply of sawdust and we want to make use of it if we possibly can on our peculiar Pend Oreille soil.

Irrigation has produced perhaps the most easily measured dollars-and-cents benefit to the farmers of this district. The average dryland hay yield is  $1\frac{1}{2}$  tons per acre. Irrigation has increased the number of cuttings from 1 to 3, and annual yields up to 7 tons per acre in some cases. Flood irrigation is used wherever possible because of lower installation costs, but in these hills sprinkler irrigation actually is much preferred. It is more versatile, uses about half as much water, and virtually eliminates soil washing and erosion. Proof of their success is indicated by the last report from the regional office of Farmers Home Administration which shows that there have been no delinquent loans on sprinkler irrigation systems.

Here's what some of our farmers say:

Stan Daugherty—"Irrigation increased my oat yield by half a ton per acre, doubled my alfalfa yield, and increased my pasture carrying capacity from 10 to 30 cows."

Lee Wood—"I have been able to support 30 head of yearlings and cows on 8 irrigated acres of rotated pasture. My sprinkler cost \$90 per acre and was paid off in 1 year. Two families make a living on 80 acres of my irrigated land."

A. M. Driver—"Best crop yet, by one-half, with irrigation."

Bruce Campbell—"Irrigation has increased my wheat yield by 12 bushels."

Ted Schwab—"I paid for my sprinklers from increased yields in 2 years."

Keith Pennell—"My regular yield of  $\frac{3}{4}$  tons of oats per acre jumped to  $2\frac{1}{2}$  tons with irrigation."

Much of this increased value from drainage, and especially from the widespread acceptance of sprinkler irrigation, is directly due to the efforts of Ed. White, Soil Conservation Service engineering aid for the district.

**CATO HAD THE IDEA.**—Some of the new fungicides used to control crop diseases and important to every conservation farmer may not be so "new" after all, according to Earl Wade, University of Wisconsin plant disease specialist. In fact some of them were being used over 2,000 years ago.

ONE day some years ago Harry Post had a vision of green pastures in place of the big areas of idle river bottom land he had seen in southern Louisiana.

Post resigned from the Federal Housing Administration and borrowed \$700 on his life insurance and \$2,500 more from his father. Then he leased some of the idle land in St. Charles Parish.

Now, 13 years later, the vision has taken on shape and substance. Alone or in partnership with others, Post controls 66 square miles of once idle land in 5 parishes. He runs 2,300 head of cattle on the lush, year round pastures that he has made out of weedy and brush-burdened land.

"Even at today's low cattle prices, you can make an adequate profit from an operation like ours," Post says.

Post has fared well and so have his landlords, for their fields have been made productive once more.

Most of all, the land has benefited from the conservation treatment Post has given it. His program includes clearing the brush and thickets with a bulldozer, seeding grass and clover wherever necessary to get a stand established quickly for grazing, installing properly-engineered drainage systems, clipping pastures regularly to control weeds, and keeping the cattle herd small enough to prevent damage to pastures through overuse.

"Abandonment of this good bottom land around 1930 shows how badly we needed to know about the conservation of our soil and water resources," Post says. "If we had put

## 66 Square Miles

By LEE FOX



### THE PICTURES

Top, left: This 18-months-old cow is a Brown Swiss Brahman cross. She is in a pasture of Dallis and bermudagrass and white Dutch clover. The pasture is clipped regularly to keep weeds controlled.

Top right: Mowing hay on the Post-Pizzolato operation in St. Charles Parish.

Bottom, left: Harry Post and Stafford A. Thiobodeaux (SCS) inspect heads of Dallis grass, 4 feet high and loaded with seed.

Bottom, right: Post shows how gentle are his registered Brahman cows. He uses grade cows and registered Brahman bulls to make quick veal. A herd of registered Brahman cows furnishes replacement bulls.



# Uses of Pastures

LEER FOX

these conservation practices on the land a generation ago, agriculture in Louisiana would be a different story today."

When it becomes necessary to graze more cattle on a given piece of land, Post says he will also add fertilizers to his conservation program.



"Right now," he explains, "when I have plenty of land I'd rather put that money into clearing, turtleback plowing and weed control. But where land is limited, fertilizing is necessary to get the greatest amount of high quality grazing."

Post gets multiple use from his pastures. In addition to year round grazing, he harvests crops of grass and cloverseed and cuts 50,000 bales of hay a year.

"With grazing the year-round, we use little hay ourselves," Post says. "We feed a little in the spring when the clover is most succulent, to prevent bloat. We never feed anything else. Most of the hay we sell."

Typical of Post's operations is a 150-acre pasture of Dallis and bermudagrass, and white Dutch and red clovers. Cattle graze the pasture all winter until March, when they are taken off to let a crop of cloverseed mature. The seed is combined in May, this harvest also producing half a ton of hay an acre. The cattle are then put back on the pasture until mid-June when they are taken off to let a hay crop develop. Hay is cut in August, and again in late October. Each cutting produces 2 tons or more per acre, so that altogether the pasture yields 4½ tons or more of hay per acre in addition to the grazing and seed crop.

Post gets year-round grazing this way: in the winter and spring, he has pastures of white Dutch and red clovers and fescue and rye grasses; in the summer and fall he has Dallis and bermudagrasses. Of course, there is overlapping of these plants.

With this top quality, year-round grazing, the cattle are always in excellent condition. Their calf crop averages a high percentage.

Post uses grade cows of various breeds and mixed breeds with registered Brahman bulls. "The Brahman bull produces a quick veal calf," Post explains. "I sell the calves in New Orleans, which is noted for its veal." Post markets them at 4 or 5 months, when they average 300 to 400 pounds.

Post also keeps a small herd of registered Brahman cows to produce replacement bulls.

Much of the land leased by Post was handicapped in the past by excess water. Some of it could not be used much of the time even for pasture. Post has solved this problem with modern drainage systems designed by Soil Con-

servation Service engineers. In a number of cases, for example, he has divided the field into plots about 100 feet wide, and "turtlebacked" each. That is, he plows each plot in such a way that it slopes gently to each side from a high point in the center, resembling old-fashioned "crowned" highways. The water drains to the sides into V-shaped ditches. These ditches carry the water to lateral ditches which take it on to main ditches that remove it from the field altogether.

An operation the size of Post's requires a lot of labor and automotive equipment. Post and Jack Pizzolato of Hahnville, a partner in some of the operations, have 7 rotary mowers used exclusively for controlling weeds; 6 cycle mowers for cutting hay; 10 tractors; 2 combines for harvesting seed crops; 2 hay balers; 2 baled hay loaders; 2 hay trailer trucks; a cattle truck and trailer-truck; 3 pick-up trucks for general farm use; and a bulldozer for clearing brushland to establish pastures. In addition they have a wide assortment of plows, disks, harrows, drags, seeders and cultipackers. Their own repair shop maintains the equipment.

Post did not get into this business blindly. He had a background in agriculture and a thorough knowledge of land values. He was well aware of the work and risks involved.

Post studied agriculture at the University of California and at Southwestern, Lafayette, La. After being graduated from Southwestern in 1932, he taught school and did 4-H Club work at Rayne until 1935. He then went to New Orleans to work for the Louisiana Rural Rehabilitation Corporation. After 3½ years he became land appraiser for the farm section of the Federal Housing Administration for Louisiana, Alabama and Mississippi. This was the job he gave up to get into the pasture-cattle business.

Half a dozen years ago Post became interested in soil conservation at a farm in New Orleans.

"I began probing around and found out that the whole State was organized into soil conservation districts excepting the six southeastern parishes around New Orleans," Post recalls. "Then I got in touch with the Soil Conservation Service and Parish Agent A. J. Melancon to see if we couldn't set the wheels of progress in

motion to get a soil conservation district organized for this part of the State."

After a lot of preliminary work by Melancon and Post, an election was held on June 4, 1949 and the landowners voted in favor of establishing the Crescent Soil Conservation District. There was not a dissenting vote.

The Crescent district is composed of Jefferson, St. Charles, St. Bernard and St. John the Baptist Parishes. Like all soil conservation districts, it is a sub-division of State government that is run by the farmers operating in the district.

Post was elected one of the five supervisors. When the supervisors held their first organization meeting on June 28, 1949, they elected him chairman of the board, a position he has held ever since.

Post owns a 558-acre pasture plantation in St. James Parish that is supervised largely by C. W. Paugespach. Recently he leased 20,000 acres in St. James, St. John the Baptist and Lafourche parishes which he is now organizing to stock with cattle. This is mostly wooded land for winter grazing. He also leases 1,000 acres of open pastures and 10,000 acres of marsh and wooded land for winter grazing in St. Charles Parish.

With his father-in-law, T. S. Landry, Post leases 300 acres of open pastures and 700 acres of woodland for winter use in Jefferson Parish. This is part of the old Willswood Plantation. They have 300 head of cattle on these pastures. Landry supervises this operation.

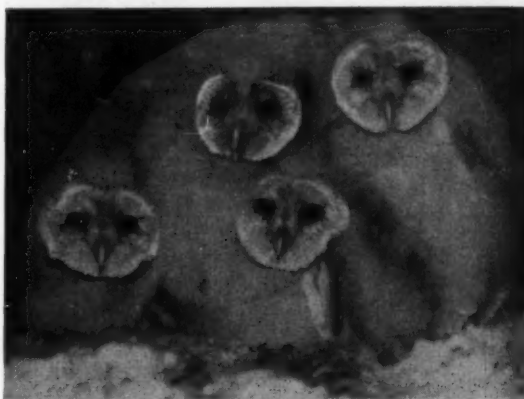
The equipment is pooled for all operations and the haying is done for the benefit of all.

Post has been cooperating with the Crescent Soil Conservation District since its organization. As a district cooperator he receives technical help from SCS in planning and applying his coordinated soil conservation program. He makes his headquarters at Luling.

Despite his widespread pasture operations and his varied agricultural activities, Post finds time to serve in various civic and community capacities. A member of the Jefferson Parish Sheriff's Mounted Posse, he takes great pride in riding his palomino horse with this group in the Mardi Gras parade in New Orleans every year.

## Raise Your Own Gopher Traps

By J. W. GARLINGHOUSE



Four friends peer out the rounded opening of their home.

**D**O you ever speculate on what more you could do to control the pocket gophers which often interfere with farming operations and certain conservation practices? You set traps, distribute poison, own a prolific cat and still you wonder if perhaps you are not actually running a gopher farm after all.

Arthur H. Anthony, avocado grower of Fallbrook, Calif., felt this way about his farm before he started helping nature to help him control the rodents. Now he is raising his own gopher traps in the form of barn owls by providing them with especially designed shelters in which they rear their young. With the assistance that the owls give him, Anthony no longer is in doubt what to do about the rodents.

The plan to raise his own gopher traps was first conceived by Anthony several years ago when a pair of owls raised a brood in his barn. Their activities convinced him of their value in gopher control. It took several years, however,

Note.—The author is work unit conservationist, Soil Conservation Service, Fallbrook, Calif.





Owls seem to favor this style of house.

of observing the owls and constructing various types of shelters for them before there was any noticeable increase in the owl population. Preventing wild bees from appropriating the owl houses was one of the problems that had to be solved.

The location and design of owl houses are important. Each pair of owls requires about 10 acres of hunting ground, and an aggressive pair will drive all others out of its territory. Placing the houses a minimum of 500 feet apart in all directions proved satisfactory. Design

of an owl house has much to do with preventing bees from occupying it, but bees will move into a house from which the owls have been driven. Best results are obtained if a hollow log, at least 4 feet long and 18 inches in inside diameter, is placed horizontally on a pole 10 or more feet from the ground. Old power poles or telephone poles are ideal supports. The hollow log is firmly fastened to the top of the pole and one end is boarded up. The other end is left open. The owls will nest as far back in the log as they can, the open end will not attract bees, since bees seem to prefer a small opening leading into a larger chamber.

Anthony also discovered it is best to locate the houses in isolated spots. Owls are timid and do not appreciate human company. They will claim newly constructed houses that are located away from frequently traveled farm roads or other busy areas of the farm. Isolated fence corners or locations within the orchard proved best. It is also advantageous to place the house near to trees or other shelter in which the adults can roost during the day. The important thing is to allow about 10 acres of hunting area per pair.

At night both parents hunt for food to feed their young. Small rodents seem to be the main diet. The parents of one brood were observed arriving with a freshly caught rodent on the average of every 20 minutes.

Owls are remarkably good housekeepers. The bones, uneaten pelts and droppings are removed from the nest and can be found on the ground below the nest. Also beneath the nest are the owl's disgorged pellets of undigested bones and hair. By examining this material it is easy to learn what the owls have been eating.

One of Anthony's owl houses was erected on January 10, 1953. It was first observed to be occupied on March 7 and on June 15 it contained four young barn owls. On the latter date the droppings beneath the nest were carefully screened and sorted. All the animal skulls were counted and it was found that the owls had eaten the following kinds and numbers of animals:

Gophers .....	94
Mice .....	89
Kangaroo rats .....	27

ma  
chi  
loo  
bor  
not  
A  
65-  
loc  
owl  
of  
lar  
gop  
It p  
for  
foll

V

B

Coun  
dale  
Con  
atin  
affai  
M  
sup  
dled  
their  
They  
Cons  
cian  
gove  
Vi

of t  
Lind  
ting  
resp  
of s  
he

Note-  
vation  
Johns



Moles .....	7
Ground squirrels .....	4
Brush rabbits .....	3
Unidentified mammals .....	17

It should be noted that no bird or fowl remains were found in the droppings. Domestic chicken and ducks, with spring hatchings, run loose in the Anthony barnyard and in his neighbors barnyards and orchards, but the owl have not preyed upon them.

Anthony has 10 occupied owl houses in his 65-acre avocado grove. Some of them are located along the property boundary so the owls also range upon his neighbors' lands. All of the houses have debris piles as large or larger than the one described. The skulls of gophers are most numerous under all nests. It pays to raise your own gopher traps in the form of barn owls and anyone can do it by following Anthony's example.

## Wins Top Prize

By EDGAR F. BAUMANN

**B**Y winning first prize for an exhibit at both the Blanco Valley Fair and the Kendall County Fair in south-central Texas, the Lindendale conservation group of the Pedernales Soil Conservation District proved again that cooperating farmers are in full charge of their own affairs.

Members of the group and supervisors of the district handled all matters pertaining to their participation in the fairs. They sought no help from Soil Conservation Service technicians or employees of other governmental agencies.

Victor Wenmohs, chairman of the district, praised the Lindendale and other participating groups for assuming full responsibilities. In earlier years of soil conservation districts, he pointed out, there was

natural dependence on experienced technicians. Now, however, the district supervisors exercise their own authority on a broad scope, and cooperating farmers and groups work out details.

"When the public," Wenmohs says, "assumes its responsibility of promoting soil and water conservation and when landowners everywhere practice conservation as a matter of course, then and only then will we supervisors feel that satisfactory progress has been made."

Since it first came together in October 1951, the Lindendale conservation group has met once a month. The group has a barbecue each spring and holds six to eight special meetings a year. Some of these meetings are held on the ground itself, studying soil conservation. Technicians serving the Pedernales district meet with the group at soil conservation meetings and on tours.

Soil conservation ranks first in interest and projects. Valentine Rose, a group member, and his son have for 3 years been collecting and mounting native grasses for study. About 50 different grasses are now in their collection. They constituted part of the exhibit.

Ellis Love, another member of the group, produces seed for conservation crops such as hubam clover, *Melilotus indica*, and alfalfa. In 1953 he harvested 2,100 pounds of hubam clover seed, 6,000 pounds of *Melilotus indica*, and 6,000 pounds of Sudan and hegari seed.

Group members not only practice conservation on their own farms and ranches, but also believe in showing their neighbors why soil conserva-



Note.—The author is work unit conservationist, Soil Conservation Service, Johnson City, Tex.

tion pays. This desire to help others and to promote conservation is why the group made soil conservation its exhibit theme.

Love frequently takes pictures of conservation. He has a large collection of color slides illustrating conservation practices carried out in the group, which he has shown at meetings of civic clubs.

Two other members of the group, Morris Lee Moore and Orvin Weber were on a team in 1952 in the Hill County judging contest. Their team took first place and received 50 pounds of buffelgrass seed as prize. As a result, there are now several fields of buffelgrass in the Lindendale area.

The group protects wildlife as part of its work.

Practically all of the group's cropland is terraced and farmed on contour. Cover crops

have been planted on nearly all cultivated land and the residue is worked into the topsoil to provide additional organic matter. Much remains to be done in range improvement, however, as prolonged drought upset the group's earlier plans. Even so, some in the group have held their stock numbers at reasonable levels and have managed the stock in such a way that they have been able to defer some pastures and reduce the grazing load on others. This has resulted in improvement in the grasses even though moisture conditions have been unfavorable.

Members of the group, in addition to those already mentioned, are B. G. Hale, Emil Kuebel, J. W. Dechert, E. R. Page, Joe P. Weber, Alfred Wilke, Charlie Whitworth, Richard Love, Fritz Kuebel, Bill Blackburn, George Grenwelge, and Arthur Dechert.

## One Needed Practice Led the Way

By HUGH F. EAMES



Here are the supervisors behind the Caroline County district's drive: Chris Nagel, Fredericksburg; Harold K. Shults, Marydel; Harry H. Reick, Preston, chairman; Willie S. Carroll, Ridgely, vice chairman; and William Engerman, Denton, Treasurer.

**F**IRST things come first in the Caroline (Md.) Soil Conservation District. This fact largely accounts for the district's 11 years of high accomplishments, of which 800 co-operating farmers are exceedingly proud.

More than 90 percent of the county's farms were suffering from lack of drainage in varying degrees. Therefore, removal of excess

water from upland became the No. 1 job, and the district consistently hammered at it. As a result, it has accomplished what no other organization there had been able to do.

By helping them make better use of their land, the district has encouraged its farmers to lift their sights. District farmers are raising their economic status by steadily increasing their productive output.

The district has brought many community benefits. The county commissioners point to the 3,000-acre increase in cropland and the heightened harvests, which have raised valuations and broadened the tax base. They also note the improved drainage which has made for better highways and lower cost of upkeep.

These things are important to Caroline County and its people because agriculture is the dominant industry. More than 80 percent of the total land area is in 1,570 farms. Agriculture production brought more than 10 million dollars in 1950. This was a jump from \$6,300,000 in 1945, and \$2,400,000 in 1940, a



Neglect of maintenance put this Caroline County main drainage ditch out of service. Silt, grass, weeds, and other growth had to be cleared out—and before that, the banks had to be made accessible for heavy equipment.

couple of years before the district began to operate.

Struggling with excess water has been a long time affair in Caroline County. Tax ditches, designed to give farmers main outlets into which they could dump excess water and move it safely into natural waterways, were dug as early as 1826. The passing years brought long periods without any organized activity, broken now and then, as in 1880-90 and again in 1905-10, with sudden but short-lived spurts of trying to lick the problem and keep it licked.

Between 1925 and 1940 many miles of tile were laid, but records of these drainage systems have been lost and no accurate estimate of the amount of tile laid can be made. The best *guesstimate* is that about 10,000 acres of cropland had been drained. This is based on the presence of tile lines unearthed in excavations for outlet ditches.

The drainage problem was under attack in 1935, when the Goldsboro CCC drainage camp put new life into the fight. By March 1942, when the Caroline Soil Conservation District started work where CCC efforts had ceased, 34 tax ditch organizations were in good standing under the state's 1941 drainage law. At that time 14 ditches had been excavated by CCC, 3 were partly completed and 13 were untouched. In the 14 completed jobs, 109 miles of ditching area had been cleared, 3 million square yards of brush and timber had been removed from embankments, 84 miles of ditch had been excavated, 818 thousand cubic yards of earth had been moved, 99 thousand cubic yards of soil bank had been leveled, and 575 farms had been benefited.

In presenting its soil and water conservation program and plan of work to farmers, the district undertook two classes of drainage activity: (1) work with groups in opening and building general outlets, and (2) work with individual farmers in building on-farm drainage systems and connecting them with the general outlets.



Effective carrier of excess water from Caroline croplands. This main ditch, cleared of obstructions, serves well the district program.



Before leveling spoil bank. This ditch on Norman Glimes farm is one of the tributaries to the Noble Brown main outlet. Glimes says ditching returned about 100 acres to cultivation. J. P. Kennard, a neighbor, grew more corn in one field the first year after ditching than in 15 years previously.

In general outlet work, as of July 1 last, the district completed 22 group jobs at a total cost of \$68,535.64. This work has benefited 14,752 acres in 232 farms. Excavation of nearly 700,000 cubic yards of earth, clearing of 227 acres for ditches, and construction of 19 structures are included in this array.

As of mid-1953, there were 30 legally constituted tax ditch organizations in Caroline County, and 8 more were being planned under soil conservation district leadership. The number of farms benefited by individual ditches ranged from 2 to 70, with length of these ditches running from 616 feet to 16.2 miles. The cost of the separate ditches had been as little as \$382.48 and as much as \$45,553. Farmers' share in the cost of these two examples had been \$66.75 and \$13,806, respectively. In tax ditch operations farmers pay about one-third of the cost and the county pays the balance. A tax ditch rarely does the whole drainage job for any farm. Usually additional on-farm work is necessary, and all of this is at the farmer's expense.

Extensive as it has been, drainage work represents only part of the accomplishments of the Caroline Soil Conservation District. As the supervisors foresaw at the outset, many other conservation practices depend on getting drainage work done first. For that reason, establishment of many common practices has not been as conspicuous as those pertaining to drainage, yet they too have been picking up

steadily. Total establishments in some of these major practices, as of July 1 last, included the following:

- 16,743 acres cover cropping
- 14,952 acres rotations
- 19,218 acres woodland improvement
- 3,300 acres pasture improvement
- 990 acres clearing, obstruction removal
- 524 acres perennial hay
- 101 acres reforestation

A complete-soil survey is another highly important achievement under the soil conservation district program. The survey was started in 1942 and by 1944 the whole land area in the county—almost 205,000 acres—had been covered. This means that a land capability map is immediately available for every acre of land in the county. As a reliable land use base, it is valuable in many activities other than agriculture; for instance, in land valuations, assessments, industrial locations, and so on.

Countywide acceptance of the district and its program is seen in the steady annual increase in number of cooperating farmers. In the first 6 months 35 asked for help and 22 became cooperators. Thirty-five were added in 1943, 84 in 1944, 146 in 1945, and 114 in 1946, to make the 5-year total reach 401. In the next 5 years, at the end of 1951, the total jumped to 715. Forty-three more were added in 1952, and this year the number comes to more than 800.

In the drainage program, Northwest Prong, Griffith tax ditch, in the Federalsburg area, is a good example of what a drainage system means to farmers. It was started in 1942, then put off until 1947, and was completed in 1950. It benefits 3,085 acres, 2,000 in cropland, in 55 farms. The main ditch and tributaries are 11.1 miles long. The job cost \$39,447 of which farmers paid \$12,000.

Willie F. Bailey tells you that "every farmer along its course has gotten a lot of good out of the job." On Bailey's 113 acres, where he lives in retirement, he has seen land that was unproductive as far back as 1926 become an abundant producer in 1951 and since. Before ditching it was "good only as a place to run cattle." Ditching has put this land on its feet and let it go back to work. Bailey has recovered the use of about 10 acres. Only 2 or 3 small wet spots are left and these are disappearing.



Before this ditch was built, says Charles Seipp, county storekeeper, almost every farmer in the area annually lost crops, sometimes worth \$1,000 or more, because they "lay in water." Occasionally only part of a crop was lost, but usually there was complete failure in one or more fields. He recalls a small-scale farmer who was approached with hesitancy by a ditching committee, because it was feared that the \$1,000 that he would be required to spend in a ditching system would be too much for his resources. This farmer studied the plan briefly, then pointed over his fields and gave this answer: "There's \$1,000 worth of beans out there that I couldn't harvest last year because it was too wet. I need the ditching and I'll go along." This kind of spirit, demonstrated so often in tax ditch and district meetings at his general store, brought the big ditch and its connecting on-farm laterals to Federalsburg.

Carl Regan's drainage job cost him \$200. He wouldn't sell it now for \$2,000, he said the other day. After he had completed his on-farm connections, it took him 3 years to rebuild his soil. In barley, a crop that he had never been able to produce, he now harvests 40 bushels per acre. Where he planted corn and was lucky to harvest a bushel per acre, he's now getting 60 to 70 bushels. Soybean output likewise has soared

from "maybe one" to 30 and 35 bushels per acre. There never is flooding at his farm.

Virgil Andrew has spent a lifetime on Federalsburg area farms. Annually, in pre-district years, he lost 6 to 10 acres of crops because of poor drainage. Now he is getting excellent yields of corn, soybeans and tomatoes. Any crop will grow anywhere and come into good harvest. He's been on his farm since 1931. Before ditching, farming was a sideline, a week-end and evening job. The rest of his time went to carpentering. Now, with 56 tillable acres, farming is a full-time job.

When L. W. Meredith bought his farm 3 years ago, 30 acres were good but the 50 remaining acres of cropland was so poor that he was told he was "wasting money and would go busted." Meredith bought because he knew a drainage job was being set up. He saw his wheat and rye down, however, before he got connections. Now he's making full use of his land and collecting profits; tilling acres that had not produced a crop in 10 years, and getting 75 to 80 bushels per acre of corn there. The county average is 42. Before ditching, 28 inches of water stood in the cellar of the farmhouse. In threshing times this storage was drawn on to feed the engine. The cellar has been dry since the ditches began to function.



Part of on-farm drainage system on Claude Howard, Jr. place; hooked to main outlet. Grain yields paid for job in 3 years.

Roland McMahan has been farming 150 acres, 100 in cropland, for 18 years. He spent about \$1,000 to get his drainage system established and says, "I wouldn't trade the investment for \$4,000." He figures the system has added a third to the value of his farm. "Where water used to stand half way up to my knees in April, I plowed last year. Without ditching, I would have been waiting in May for the field to dry out so I could start plowing, he comments. *In 1953 he cropped land that had not been plowed in 33 years. Over all, this field was the driest that it had been in 50 years, yet spring in '53 was a wet season in Federalburg area.*

Christian Nagel, with half a century in farming, is operating a 280-acre home farm, with 70 acres in cropland. Here is a good example of how drainage pulls a no-good farm out of the water and heads it into a productive enterprise. A lot of crop failures, due to excess water, left the former owner on a spot where he couldn't pay his taxes and had to lose his farm. Nagel took over, put the place under a complete conservation plan with the Caroline Soil Conservation District, established an outlet and on-farm drainage, made the best use of his land, and put other good practices to work. As a result, he paid for the place in less than 2 years. Corn production has jumped from 20 to 100 bushels per acre, wheat has gone from 10 to 25 bushels per acre, and soybeans likewise are soaring. *"There has been a 50 percent improvement in production straight across the boards," Chris Nagel says.* He figures the total value of the farm has increased tenfold.

That's why he now has 3 farms under complete conservation plans with the Caroline Soil Conservation District, which he serves as a director. His 4 sons are operating under similar plans. In general farming operations Chris features broilers and dairy products.

In looking over countywide accomplishments under the Soil Conservation District program, with drainage as the first big objective, Chris Nagel says: "Not much, if any, of the work would have been done if the district had not been here to lead the way and lend a helping hand." He's particularly pleased with the way farmers are snapping into their new opportunities. He has a special interest in

maintenance of general outlet and on-farm ditches; notes that they need attention every 2 or 3 years, and is encouraged by movements now under way to make sure that this upkeep is done systematically and that their condition never reverts to another period of neglect and abandonment.

Getting all general outlet and on-farm ditching work done as quickly as possible is very important in Caroline County. It means as much in every other area as it does in Federalburg. The whole country benefits when all farmers, like Willie Bailey, can have their "best years" on their land, because their drainage headaches are cured.



**MORRILL MOVES ON, SETTLE ARRIVES.**—A. H. Settle (right) recently became director for the Soil Conservation Districts Awards Program for the Goodyear Tire and Rubber Company, Inc. He succeeds A. G. Morrill (left) who was director of this program for 3 years. Under the direction of Morrill, this program grew from one covering a limited area of the United States until last year, for the first time, all States were included. Morrill will be associated with foreign tire sales for the Goodyear company. Settle previously had been employed by the company in its sales organization.

The 1954-55 Goodyear Awards Program has been announced and is essentially the same as that for 1953-54. The program is conducted for soil conservation districts and emphasizes their activities as well as their achievements in soil and water conservation. During the past year's contest, about 60 percent of all conservation districts took part.

The Goodyear company entertains 50 district supervisors and 50 soil conservation district cooperators who are State award winners with a free vacation trip to Goodyear Farms in Litchfield Park, Ariz., in December.

T  
out  
Ben  
con  
Com  
year  
prop  
sista  
and  
sities  
and  
cultu  
spon  
serv  
have  
staff  
carry  
the

TH  
spiri  
incre  
and  
appli  
throu  
invol  
the  
conse  
and  
and  
ranch

Th  
serva  
relati  
the A  
ice a  
respo  
and S  
of soi  
exten

Note.—  
Soil Co

# Teamwork in Conservation

By A. M. HEDGE

TEAMWORK in conservation is a theme that is being given renewed emphasis throughout the Department of Agriculture. Secretary Benson, in his address at the eighth annual convention of the National Association of Soil Conservation Districts in New Orleans this year said: "We believe that a dynamic national program of research, education, technical assistance, and where needed, cost sharing in soil and water conservation is one of the basic necessities of American agriculture. It is the policy and firm intention of the Department of Agriculture to discharge fully its part of that responsibility." Administrators of the various services within the Department of Agriculture have jointly and individually issued to their staffs instructions in respect to teamwork in carrying out the department's responsibility in the conservation program.

There is much evidence that the renewed spirit of teamwork is paying off, in terms of increased efficiency of departmental workers and in increasing amounts of conservation applied to the land by farmers and ranchers throughout the nation. Successful teamwork involves not alone professional workers within the Department of Agriculture but also soil conservation districts governing bodies, local and State agencies, agricultural stabilization and conservation committees, and finally the ranchers who operate the land.

The results of successful teamwork in conservation are showing up in progress reports relating to the cost sharing program for which the Agricultural Conservation Program Service and the Soil Conservation Service\* share responsibility within the department. County and State ASC Committees, governing bodies of soil conservation districts, county and State extension workers and technicians of the Soil

Conservation Service have worked together more closely than ever during the past year to formulate a program of cost sharing that has enabled farmers and ranchers to carry out conservation programs that would not have been possible without such assistance.

In 1953 one-third more farmers were assisted with their cost sharing practices by technicians of SCS than was the case in 1952. About 732,000 farmers and ranchers received such technical assistance in 1953. Of these, 49 percent were cooperators with their soil conservation districts and during the year another 11 percent became district cooperators. Thus, it appears that large numbers of farmers and ranchers who requested help in cost sharing benefited also by receiving the same kind of technical assistance as those who were district cooperators. At the same time, the conservation programs of districts were materially advanced through the assistance given under the cost sharing program of the ACP.

That research and education played important supporting roles to cost sharing and technical assistance made available to farmers participating in the conservation program should not be overlooked. Through teamwork the resources of all agencies were made available to the end that *one-third more farmers and ranchers were able to carry out sound soil and water conservation practices than was the case in 1952.*

Some of the more important practices carried out with cost sharing and technical assistance during 1953 include: farm drainage, 972,869 acres; stock water dams and ponds, 41,647; contour farming, 1,455,221 acres; terraces, 1,847,908 linear feet; land leveling, 496,099 acres; water disposal areas, 28,927 acres; sod waterways, 12,559,053 cubic yards; diversions and dikes, 15,464,687 linear feet; contour strip-cropping, 193,249 acres; reorganization of farm irrigation systems, 460,651 acres; grazing land management, 4,141,795 acres; erosion control dams, 4,998; improved water application, 109,251 acres; irrigation reservoirs, 1,648; and streambank erosion control, 750,334 linear feet.

Of course a great many practices, particularly of a vegetative character, were carried out under the cost sharing program in addition

Note.—The author is chief, farm and ranch planning branch, Soil Conservation Service, Washington, D. C.



to those on which technical assistance from the Soil Conservation Service was supplied. Likewise, cooperators of soil conservation districts carried out many practices on which they did not find it necessary to request cost sharing assistance.

**BANKER LOOKS TO THE LAND.**—John A. Black, president of the Rock Hill National Bank, Rock Hill, S. C., advertises the fact that his business is strictly banking, but supervisors of the Catawba Soil Conservation District have found out that he is also a soil conservationist. He owns several farms in York and Chester counties, but makes no claims to being a dirt farmer.

After opening his bank in 1941 Black began to plant sericea lespedeza on his farms. His enthusiasm for the plant communicated itself to "planters" and farmers, and his bank quarters resounded to talk about sericea. Numerous farmers took up the plant as a major crop.



Both working toward same goal: Earl Glascock, district supervisor, and John Black, president of Rock Hill National Bank.

Supervisors of the Catawba Soil Conservation District established a sort of unofficial partnership with Black in the promotion of the district program. His bank sponsored a weekly advertisement featuring soil and water conservation from September 1943 through December 1946.

This activity presently was being copied in other states and by other business firms.

During 1947 the Rock Hill National Bank sponsored a radio program three times a week over WRHI, Rock Hill, and persuaded the local SCS office to furnish timely tips for its use on what farmers were doing in soil and water conservation.

In January 1948 the bank sponsored the first Certificate of Merit banquet, in cooperation with the South Carolina Bankers Association and the supervisors. One hundred farmers, agricultural workers and business

and professional men came as guests. The certificates were bestowed on 25 outstanding conservation farmers in the 4-county soil conservation district.

For the past year Black has sponsored a weekly advertisement in the Rock Hill Evening Herald encouraging farmers to plant pine trees. This series of ads is still going along.

York County farmers cooperating with the Catawba District will plant 443,000 pine seedlings during the 1953-54 planting season. Orders for at least 100,000 of these were signed in the lobby of Rock Hill National Bank. Black purchased 36 planting bars for loan to farmers for planting trees in York and Chester counties.

Although a public farm talk in the bank lobby has been most popular, during recent months, supervisors of the Catawba District are still pushing in on a wide front the enthusiasm of their banker friend. Because of the more and more serious losses in York and adjoining counties are being suffered from soil and water losses, and are growing timber tomorrow.

—M. B. BRISSE

**MAY 28 1954**

**SIGNIFICANCE OF WATER.**—A river in flood means different things to different people. To the property owner along the stream, it means possible loss of buildings, livestock and crops. The highway engineer sees potential destruction to roads and bridges. The angler sees loss of fish food and fish habitat. The navigation authority sees the flood in terms of silt load and future channel-dredging need. Some farmers with low-lying corn fields along the river might think of the flood as enrichment for their fields—the depositing of fertile soil washed from upstream farms.

In recent years, a growing number of us have observed the color of the flood water. We realize that the muddy color can be attributed to the heavy silt load—the all-important topsoil from our farms—a loss that seriously affects our national well-being.

Today, some of us see the volume as well as the color. We realize that water itself is not an unlimited resource—that water which floods downstream to the ocean will not be available, later, for crops, industry, human consumption, and recreation. The simple truth is that in a growing number of areas the inadequacy of the water supply has become one of our most serious problems.

—Sport Fishing Institute Bulletin

God created the good earth for the service of this and future generations. The earth is the Lord's, and tillers of the soil are stewards whose rights are matched with responsibilities. The earth and the homesteads upon it should be hallowed by acts of dedication and thanksgiving. Good husbandry is a clear moral obligation, and the waste of created resources is a sin against our neighbor, against posterity, against the natural order, and against God.

—The Executive Committee, Commission of Churches on International Affairs